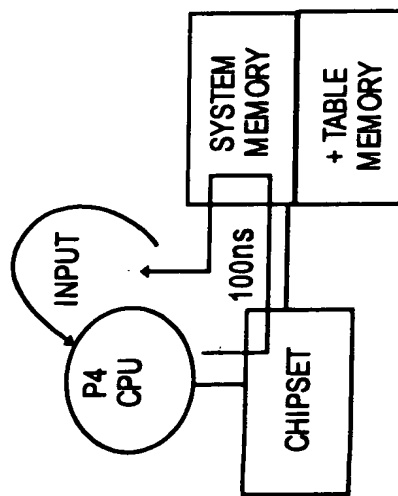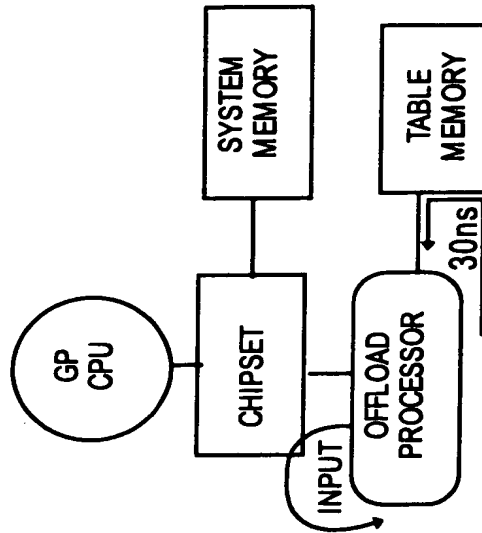| PROPERTIES OF DFA AND NFA TECHNIQUES USED ON CONVENTIONAL MICROPROCESSORS	STORAGE BOUND ON # OF STATES (FOR R CHARACTER REGULAR EXPRESSION)	EVALUATION TIME (FOR N BYTES OF INPUT) [ORDER OF]
DETERMINISTIC FINITE STATE AUTOMATA OR DFA RUNNING ON A GP CPU	2^R (NEEDS VERY LARGE MEMORY)	N MEMORY ACCESS CYCLES
NON-DETERMINISTIC FINITE STATE AUTOMATA NFA RUNNING ON A GP CPU	R	R * N CPU CACHE+BRANCH CYCLES

FIG. 1A
(PRIOR ART)

COPROCESSOR CLOSER TO TABLE IN SRAM

SYSTEM MEMORY

GP CPU

CHIPSET

INPUT

OFFLOAD PROCESSOR

TABLE MEMORY

30ns

CPU WALKING DFA TABLE IN DRAM

SYSTEM MEMORY

+ TABLE MEMORY

INPUT

100ns

P4 CPU

CHIPSET

PERFORMANCE ON EVALUATING REGULAR EXPRESSIONS ON EVERY BYTE OF INPUT STREAM

100s OF REs @ 280 Mbps

100s OF MBs OF SRAM

1000s OF REs @ 100 Mbps

GIGABYTES OF MEMORY

FIG. 1B
(PRIOR ART)